

Burden on farm incomes from the social and health insurance of farmers

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Abstract

The analysis and evaluation of social and health insurance costs among FADN farms has a cognitive character. The income burden of the surveyed farms for social and health insurance contributions is constant and low (Table 3 and Table 4). In the case of production types, mixed farms and farms with permanent crops and grassland bear the highest relative burden. On these farms, social and health insurance costs account for about 2.5% of their income. These insurance premiums are a much smaller income burden for poultry and pig farms. This is because social and health insurance costs are almost constant in absolute terms over the years studied. This variable responsiveness among households is the result of varying incomes. This differentiation takes place both by production types and by economic classes and FADN regions. Poultry farms and pig farms earned relatively higher incomes than others in 2017–2019. This means that hypothesis two is confirmed. There is an analogous regularity in the case of economic classes of the surveyed farms. The higher the economic class, the lower the burden of social and health insurance contributions on farm incomes. Thus, hypothesis three was positively verified. There are several variations. The income of very small farms is most heavily burdened by these contributions. Their loading rate averaged 3.56% for the years under study. Social and health insurance is relatively the least costly for medium, large and very large households. The charges for these insurances here are 0.53%, 0.50% and 0.30% respectively.

The presented study is for illustrative purposes only. The results of the research described herein may be helpful when proposing new solutions concerning the health and social insurance system in Agricultural Social Insurance Fund (KRUS).

Keywords: income, farm, costs, economic power, contributions, social security, health insurance.

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Introduction

Social and health insurance for farmers is the subject of much debate and polemic. Most often they take place in relation to this type of insurance of non-agricultural population.

The purpose of this study is to present and evaluate the burden of farm income from the social and health insurance contributions incurred by farms, which are important risks in agricultural activities¹. In the study, data of farms keeping agricultural accounts within the Polish FADN² were used. There are about 12 thousand farms keeping this kind of accounts and they represent about 700 thousand of all farms in Poland. The method of financial and tabular analysis was used to assess the contribution of social and health insurance costs to farm income.

The study formulated three research hypotheses:

1. The burden of farm income on farmers' social and health insurance has been constant and low over the years.
2. The smallest share of social and health insurance contributions in the income is observed in poultry and swine farms.
3. As the economic strength of farms increases, the share of social and health insurance costs decreases.

Rules for calculating social security contributions

Regulations concerning the calculation of social insurance contributions are contained in the Act of 20 December 1990 on social insurance of farmers³. According to them, the contribution for accident, sickness and maternity insurance for each insured person is set by the Farmers' Council and published by the President of KRUS in the form of a communiqué in the Official Journal of the Republic of Poland "Monitor Polski". The pension contribution for each insured person is 10% of the basic pension, the procedure for the announcement of which is identical to that for

1. J. Möllmann, M. Michels, C.F. von Hobe et al., *Status quo des Risikomanagements in der deutschen Landwirtschaft: Besteht Bedarf an einer Einkommensversicherung?*, Berichte über Landwirtschaft-Zeitschrift für Agrarpolitik und Landwirtschaft 96, No. 3, 2018.

2. FADN – Farm Accountancy Data Networks. The study uses data from farms accounting under FADN in 2017–2019.

3. Social insurance for farmers is regulated by the Act of 20 December 1990 (Ustawa z 20 grudnia 1990 roku), Dz. U. 2021 poz. 266.

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the sickness, accident and maternity contribution. Social insurance contributions in KRUS are calculated on a monthly basis, regardless of whether the insurance is compulsory or voluntary.

A person running an agricultural holding shall pay the following contributions to the pension insurance scheme, depending on the area of the holding:

- up to 50 conversion ha: basic contribution,
- up to 100 conversion ha: an additional contribution of 12% of the basic pension,
- more than 100 conversion ha up to 150 conversion ha: additional contribution of 24% of the basic pension,
- more than 150 conversion ha up to 300 conversion ha: additional contribution of 36% of the basic pension,
- over 300 conversion ha: an additional contribution of 48% of the basic pension.

A farmer who additionally carries out non-agricultural economic activity pays double the contribution to the pension insurance, in addition to the contributions resulting from the area of the farm.

In the case of personal care of your own child, your spouse's child or an adopted child, it is possible to finance pension insurance premiums from the state budget for:

- a farmer and a household member subject to both compulsory and voluntary insurance;
- a farmer and a household member who is not subject to social security for farmers;
- a person who is a member of the farmer's family or a household member and does not satisfy the conditions for being covered by social security for farmers.

The amount of contributions for pension insurance in KRUS in 2021 is presented in Table 1.

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Table 1. Social contributions of farmers

Amount of social insurance contributions for farmers in the third quarter of 2021							
Insured status and size of agricultural holding	Insurance premium amount (PLN)						Total contributions from one insured person quarterly
	pensions			accident, sickness, maternity			
	basic monthly contribution	additional monthly contribution	total monthly contribution	quarterly	monthly contribution	quarterly	
I. A farmer/wife (spouse) of a farmer carrying out an agricultural activity in an agricultural holding with a surface area of:							
up to 50 ha	101 PLN	0 PLN	101 PLN	303 PLN	42 PLN	126 PLN	429 PLN
over 50 ha to 100 ha	101 PLN	122 PLN	223 PLN	669 PLN	42 PLN	126 PLN	795 PLN
over 100 ha to 150 ha	101 PLN	243 PLN	344 PLN	1,032 PLN	42 PLN	126 PLN	1,158 PLN
over 150 ha to 300 ha	101 PLN	365 PLN	466 PLN	1,398 PLN	42 PLN	126 PLN	1,524 PLN
over 300 ha	101 PLN	487 PLN	588 PLN	1,764 PLN	42 PLN	126 PLN	1,890 PLN
Farmer's household member (in any area category)	101 PLN	0 PLN	101 PLN	303 PLN	42 PLN	126 PLN	429 PLN
II. A farmer/wife (spouse) of a farmer carrying out nonagricultural economic activity and agricultural activity on a holding with a surface area in hectares:							
up to 50 ha	202 PLN	0 PLN	202 PLN	606 PLN	42 PLN	126 PLN	732 PLN
over 50 ha to 100 ha	202 PLN	122 PLN	324 PLN	972 PLN	42 PLN	126 PLN	1,098 PLN
over 100 ha to 150 ha	202 PLN	243 PLN	445 PLN	1,335 PLN	42 PLN	126 PLN	1,461 PLN
over 150 ha to 300 ha	202 PLN	365 PLN	567 PLN	1,701 PLN	42 PLN	126 PLN	1,827 PLN
over 300 ha	202 PLN	487 PLN	689 PLN	2,067 PLN	42 PLN	126 PLN	2,193 PLN
Farmer's household member carrying out non-agricultural economic activity (in any area category)	202 PLN	0 PLN	202 PLN	606 PLN	42 PLN	126 PLN	732 PLN

Source: Announcement of the President of KRUS of 2 June 2021 on the amount of monthly contribution to accident, sickness and maternity insurance in the third quarter of 2021 (Obwieszczenie Prezesa KRUS z 2 czerwca 2021 roku w sprawie wysokości miesięcznej składki na ubezpieczenie wypadkowe, chorobowe i macierzyńskie w III kwartale 2021 roku), Monitor Polski poz. 522.

Rules of health insurance for farmers, homemakers and pensioners from KRUS are regulated by the Act of 27 August 2004 on health care services financed from public funds and the Act of 14 October 2021 amending the Act on health care services financed from public funds⁴ and some other acts. According to them, health insurance is obligatory for:

- 1) farmers who are:
 - subject to social insurance for farmers both by law and on application;
 - are not subject to social insurance for farmers or to health insurance on any other grounds and are engaged in agricultural activity in an agricultural holding with an area equal to or greater than 1 ha of agricultural land;
- 2) the farmer's household members who work permanently in the agricultural holding;
- 3) persons receiving a pension from KRUS and members of their families;
- 4) the farmer's employees.

Persons collecting structural pensions, persons who have ceased agricultural activity but continue pension insurance in KRUS are not subject to health insurance.

The interested person submits the application for health insurance in an organisational unit of KRUS competent for the place of location of an agricultural holding. Then KRUS passes the data to the National Health Fund and the person becomes eligible for primary health care services. The farmer's family member benefits from the health insurance of the person who enrolled him. No health insurance premiums are paid for the farmer's family member. If a member of the farmer's family is a student, his/her insurance ceases on the day he/she turns 26. After the age of 26, students are enrolled in health insurance by their university.

The health insurance contribution is paid for the entire month and is indivisible.

The contribution rates are as following:

- agricultural holdings – PLN 1 for each full conversion hectare of agricultural land;
- special departments of agricultural production – the contribution for a farmer and household member is 9% of the declared contribution assessment basis; this basis is the income determined for taxation with PIT, in an amount not lower than the minimum wage in the national economy.

The amount of the health insurance premium for household members working exclusively in special divisions of agricultural production is 33.4% of the average monthly remuneration in the enterprise sector.

4. Ustawa z 27 sierpnia 2004 roku o świadczeniach opieki zdrowotnej finansowanych ze środków publicznych, Dz. U. 2021 poz. 1285, 1292, 1559, 1773, 1834.

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For pensioners, the health contribution amounts to 9% of the basis of its assessment, of which the insured person finances the contribution of 1.25% of the basis from the net amount of the pension. A contribution of 7.75% of the base reduces the advance payment of income tax. Farmers and members of their households carrying out non-agricultural economic activity are subject to health insurance only on account of their agricultural activity.

Health insurance contributions for farms with less than 6 ha of utilised agricultural area are paid from the State budget. However, the premiums for this insurance are paid by the farmers themselves, if their farms have more than 6 conversion ha of agricultural land.

The amount of the health insurance premium for farmers running special divisions of agricultural production is presented in Table 2.

Table 2. Dimension of health insurance contribution for farmers running specialised departments of agricultural production

Period	Contribution in % of base	Base in PLN*	Contribution amount in PLN
From 1.01.1999 to 31.05.1999	7.50	318.00	23.85
•			
•			
•			
From 1.01.2004 to 30.04.2004	8.25	418.00	34.45
•			
•			
•			
Until 1.01.2021	9.00	2,800.00	252.00

* It is declared for the assessment of PIT, not lower than the amount of the minimum wage in the national economy.
Source: Dz. U. 2004 nr 201 poz. 2135.

Degree of burden on farm incomes social and health insurance contributions

As it has been indicated in the introduction, the assessment of costs on account of social and health insurance in relation to the income of farms has been carried out on the basis of FADN data. These are presented in Table 3.

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Table 3. Cost of social and health insurance in relation to income of farm types

Specification	Agricultural type of the holding									
		field crops	horticultural crops	permanent crops	dairy cows	herbivorous animals	pigs	poultry	mixed	total
Number of households in the sample	2017	3,922	304	445	2,655	739	657	72	3,313	12,103
	2018	4,140	276	438	2,553	840	592	61	3,152	12,032
	2019	4,439	250	424	2,430	969	506	66	2,901	11,985
Income from households (PLN)	2017	39,187	54,673	36,346	85,484	24,833	77,065	332,879	26,954	42,113
	2018	38,475	69,185	19,282	83,143	24,021	50,833	330,532	22,449	37,770
	2019	41,343	85,131	32,009	86,982	27,381	90,910	28,004	30,020	44,647
Social insurance contribution in KRUS (PLN)	2017	581	592	576	629	521	589	729	525	560
	2018	576	605	582	640	523	600	717	541	568
	2019	572	604	569	665	532	593	3,980	542	596
Contribution to health insurance (PLN)	2017	118	180	83	106	95	96	601	93	109
	2018	115	189	98	98	106	105	269	95	107
	2019	113	207	101	103	102	101	281	97	107
Total contributions to social and health insurance (PLN)	2017	699	772	659	735	617	685	1,330	618	669
	2018	691	794	680	738	629	705	986	636	675
	2019	685	811	670	768	634	694	4,261	639	703
Share of social and health insurance contributions in the income of agricultural holdings	2017	1.78	1.41	1.81	0.86	2.48	0.89	0.40	2.29	1.59
	2018	1.80	1.15	3.53	0.89	2.62	1.39	0.30	2.83	1.79
	2019	1.66	0.95	2.09	0.88	2.32	0.76	1.52	2.13	1.57
Average in years 2017–2019		1.75	1.17	2.48	0.88	2.47	0.74	0.74	2.42	1.65

Source: FADN data. Own calculations.

The data presented in Table 3 show that the cost of social and health insurance of farmers in relation to their income is relatively low and relatively constant. Among all the examined households, the share of social and health insurance contributions in relation to farm income amounted to approximately 1.65% on average in the examined years. Thus, hypothesis one was verified positively.

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The lowest relative cost of social and health insurance is incurred by farms producing pigs and keeping poultry. This indicates that hypothesis two has been confirmed. The relatively highest costs of social and health insurance occur in mixed and permanent crop farms. In this case, the cost from these insurances relative to the income from these farms was 2.42% and 2.48% respectively. Relative variation in the burden of farm income on account of social and health insurance contributions is a result of differences in income levels of the surveyed farms^{5,6}. However, the level of premiums from this type of insurance in the surveyed farms is almost constant. Over the surveyed years, it has fluctuated around 700–800 PLN per farm per year. Persons conducting non-agricultural economic activity were obliged to pay in 2018 a social insurance contribution of PLN 912.22 per month and PLN 297.28 in health contribution. The total amount was PLN 1,210 per month. The next table assesses the costs of social and health insurance in relation to the income of FADN farms grouped by economic size.

Table 4. Cost of social and health insurance in relation to income of economic types of households

Specification	Economic class of holdings							total
	very small	small	medium small	medium large	large	very large		
Number of households in the sample	2017	779	4,189	3,691	2,467	995	22	12,103
	2018	1,002	4,342	3,451	2,320	905	12	12,032
	2019	1,094	4,512	3,322	2,190	840	17	11,985
Income from agricultural homesteads (PLN)	2017	9,472	31,130	80,201	151,258	313,299	724,994	42,113
	2018	8,778	26,606	73,608	137,974	302,796	–	37,770
	2019	11,707	32,373	82,548	154,261	350,948	1,030,573	44,647
Social insurance contribution in KRUS (PLN)	2017	322	465	617	775	1,032	1,205	459
	2018	333	463	621	786	1,045	–	463
	2019	312	460	615	769	2,010	1,892	474
Contribution to health insurance (PLN)	2017	25	52	98	177	342	1,446	62
	2018	28	49	96	163	330	–	59
	2019	26	50	95	157	329	532	58
Total social and health insurance contributions (PLN)	2017	342	517	715	952	1,374	2,651	521
	2018	361	512	717	949	1,375	–	522
	2019	338	510	710	926	2,339	2,424	532

- Z. Floriańczyk, S. Mańko, D. Osuch et al., *Wyniki standardowe 2013 uzyskane przez gospodarstwa rolne uczestniczące w Polskim FADN. Część I. Wyniki standardowe*, Warszawa, IERIGŻ–PIB, 2014.
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Specification	Economic class of holdings							
		very small	small	medium small	medium large	large	very large	total
Share of social and health insurance contributions in the income of agricultural holdings (%)	2017	3.67	1.66	0.89	0.63	0.44	0.36	1.24
	2018	4.11	1.92	0.97	0.69	0.45	–	1.38
	2019	2.89	1.57	0.86	0.26	0.67	0.23	1.19
Average in years 2017–2019		3.56	1.72	0.91	0.53	0.52	0.30	1.27

Source: FADN data. Own calculations.

The data in Table 4 prove that hypothesis three has been verified positively, as farms with higher economic power are characterised by a smaller share of social and health insurance contributions in realised income. In farms of very low economic strength (2–8 thousand), the costs of social and health insurance constituted 3.56% of their income on average in the examined years. The smallest share in the income is constituted by premiums from the analysed insurance titles among households of medium size, large size and very large as regards economic classes. In relation to income, these shares were 0.53, 0.52, and 0.30, respectively. On average, for the 2017–2019 study period, the share of social and health insurance contributions burden in farm income was 1.27%. In relation to persons engaged in non-agricultural economic activity, this share is symbolic.

This part of the study assesses the degree of burden of farm income on social and health insurance by FADN regions. The relevant information is provided in Table 5.

Table 5. The degree of burdening the income of farms with social and health insurance contributions in FADN regions

Specification	FADN Region					
		Pomorze and Mazury	Wielkopolska and Śląsk	Mazowsze and Podlasie	Małopolska and Pogórze	Total
Number of households in the sample	2017	1,831	4,352	4,485	1,435	12,103
	2018	1,818	4,327	4,459	1,428	12,032
	2019	1,812	4,299	4,434	1,440	11,985
Income from agricultural homesteads (PLN)	2017	57,871	54,301	38,683	27,079	42,113
	2018	53,530	45,296	34,782	27,168	37,770
	2019	62,127	53,589	40,830	33,289	44,647

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Table 5. The degree of burdening the income of farms with social and health insurance contributions in FADN regions (cont.)

Social insurance contribution in KRUS (PLN)	2017	540	486	450	401	459
	2018	553	485	458	401	463
	2019	725	482	439	407	474
Health insurance contribution (PLN)	2017	104	96	49	29	62
	2018	113	88	45	29	59
	2019	108	86	45	30	58
Total social and health insurance contributions (PLN)	2017	644	582	499	430	521
	2018	666	573	503	430	522
	2019	833	568	484	437	532
Share of social and health insurance contributions in the income of agricultural holdings (%)	2017	1.11	1.07	1.29	1.59	1.24
	2018	1.24	1.27	1.45	1.58	1.38
	2019	1.34	1.06	1.18	1.31	1.19
Average in years 2017–2019		1.23	1.13	1.31	1.49	1.27

Source: FADN data. Own calculations.

In the case of estimating the degree of burdening the income of farms with social and health insurance contributions in the FADN regions, it can be clearly seen that it is determined by the level of income obtained by the researched farms. The smallest income is obtained by farms from the Małopolska and Pogórze regions. Hence, among them, the highest burden of social and health insurance costs on their income. It averaged 1.49% from 2017 to 2019. The income of farms in Wielkopolska, Śląskie, Pomorze and Mazury regions is relatively less burdened with premiums for these insurance policies. Here, the ratio of contributions to income averaged 1.13% and 1.23% respectively in the years under review. Among all surveyed households, the average burden of social security and health insurance on their income was 1.27% in 2017–2019. Both this spatial analysis and previous ones show that social and health insurance costs represent a low rate of burden on farm income.

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received: 01.10.2021
accepted: 04.11.2021

